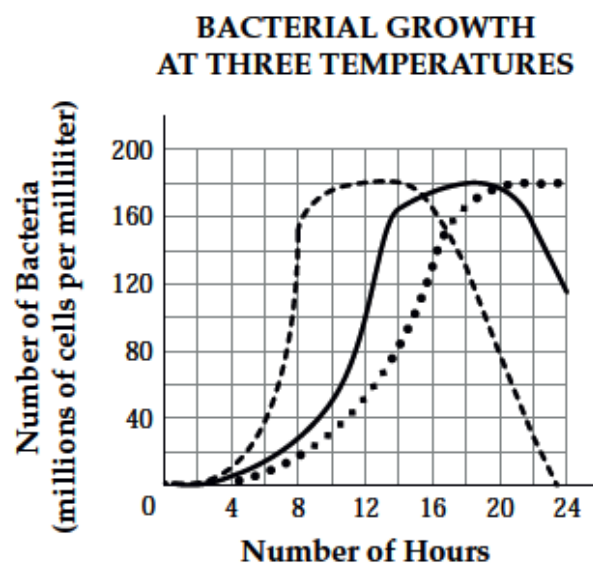


Use the information and the graph below to answer Numbers 6 and 7.

A scientist was studying the effect of temperature on the growth of bacteria. She prepared three identical cultures of the bacteria, but grew each culture at a different temperature—18°C, 25°C, and 37°C. All other factors in the experiment remained the same. She counted the number of bacteria in the cultures every four hours during the experiment. The graph below shows the results.



KEY	
--	Growth Rate at 37°C
—	Growth Rate at 25°C
...	Growth Rate at 18°C

Which of these treatments would result in a mutation in some of the bacteria?

#1

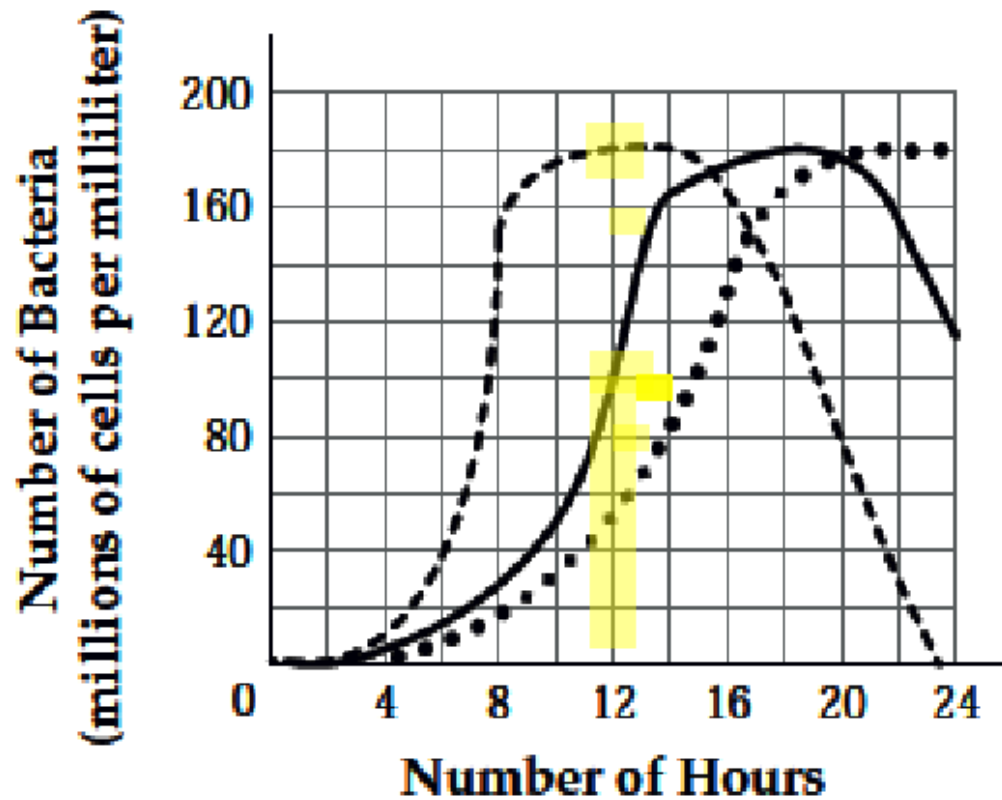
- A adding salt water to the culture
- B changing the pH of the culture
- C increasing the temperature of the culture
- D exposing the culture to ultraviolet radiation

The scientist grew a fourth culture at 30°C for 12 hours. About how many bacteria per milliliter would be produced in this culture?

#2

- A less than 80 million
- B between 80 and 120 million
- C between 120 and 180 million
- D more than 180 million

BACTERIAL GROWTH AT THREE TEMPERATURES



KEY

- Growth Rate at 37°C
- Growth Rate at 25°C
- ... Growth Rate at 18°C

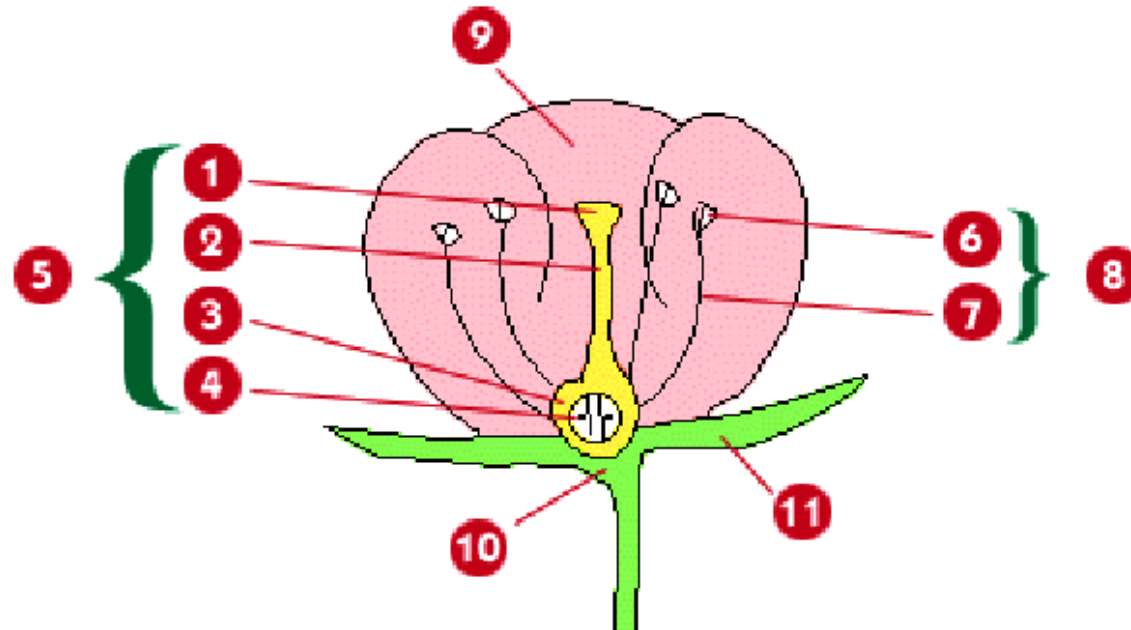
Each body cell in an earthworm contains 36 chromosomes. How many chromosomes are in each of its gametes? Sex cells (eggs or sperm)

18 A

36 B

54 C

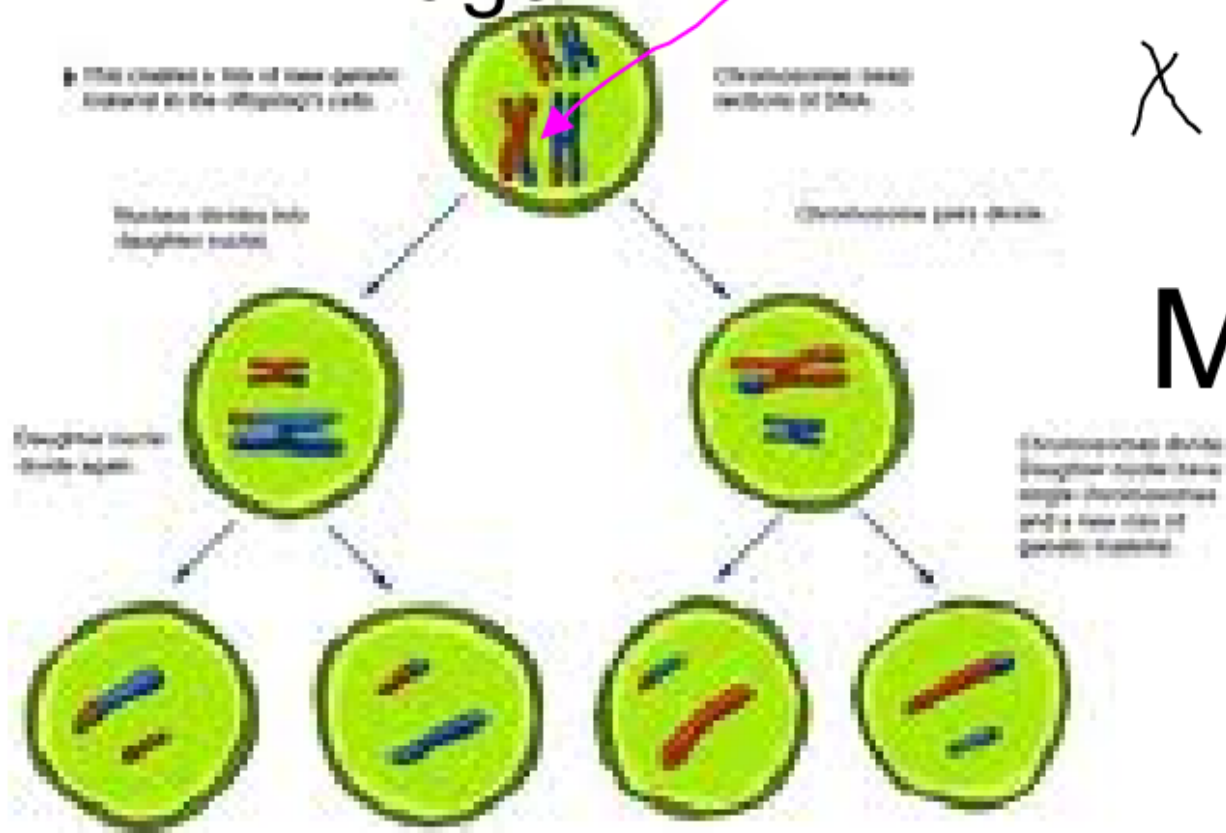
72 D



Part **1** is the sticky part of the pistil that pollen sticks to.

Is it the **A** anther, **B** ovule, or **C** stigma?

Page 72



chromosome
= copied DNA

Meiosis

Daughter cells = one half the # of chromosomes

Pg 73
ISN

Reproduction is the process through which organisms create offspring that contain all or part of the parents' genetic material.

Asexual

Sexual

Asexual Reproduction

- 1 parent
- ALL of the offspring are **genetically identical** to the parent

Types

- Binary Fission = Bacteria
- Budding = Hydra
- Regeneration = Starfish
- Vegetative Propagation/Reproduction

Bacteria

Hydra



Budding

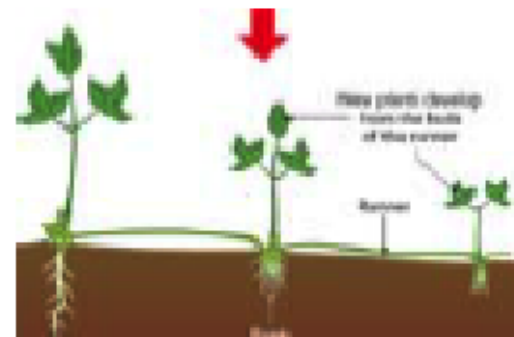


Binary Fission

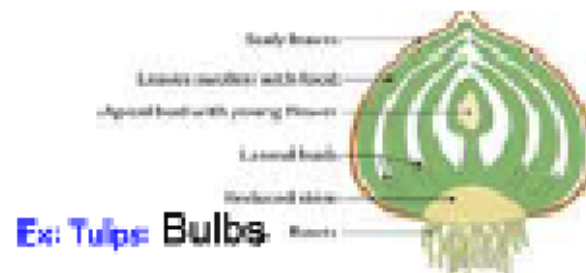


Regeneration
starfish

Vegetative Reproduction



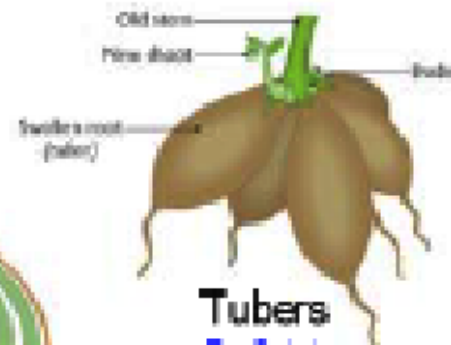
Runners



Ex: Tulips Bulbs



Rhizomes
Ex: Ginger

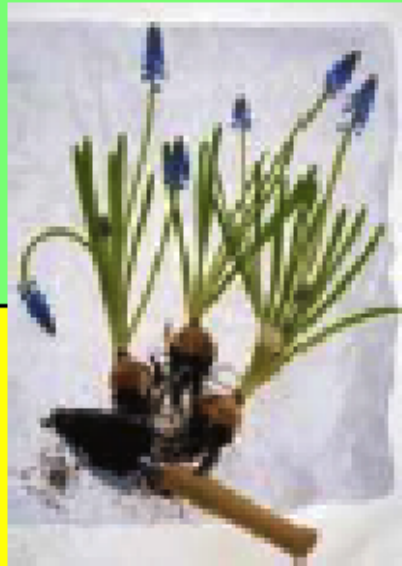


Tubers
Ex: Potatoes

Asexual Reproduction

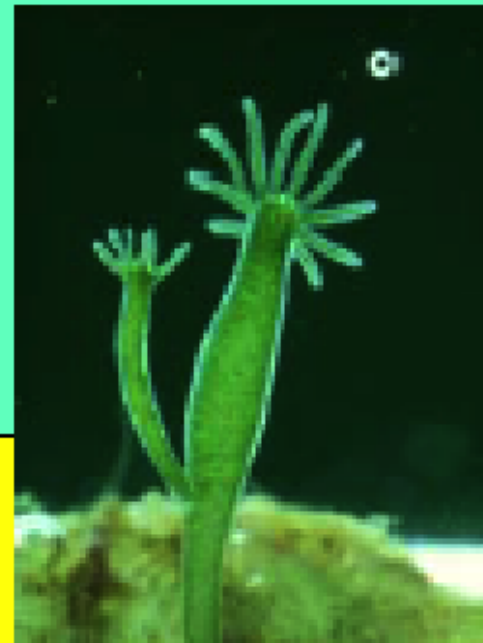
Advantages

- requires only one parent
- no mate needed
- faster and easier
- rapid population growth
- no travel is necessary



Disadvantages

- no genetic diversity
- difficulty in adapting to environmental changes



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**I CAN DISTINGUISH
BETWEEN ORGANISMS THAT
REPRODUCE SEXUALLY OR
ASEXUALLY.**

1. Come in and grab your clicker.
2. Be ready to take your bellringer.
3. We will be doing notes today on Meiosis and Sexual/Asexual Reproduction.

and your ISN!

Print Layout View Sec 1 Pages: 1 of 1 Words: 36 of 36 75%

Sexual Reproduction

- involves 2 parents
- ALL of the offspring are a genetic combination of **both** parents

Gametes

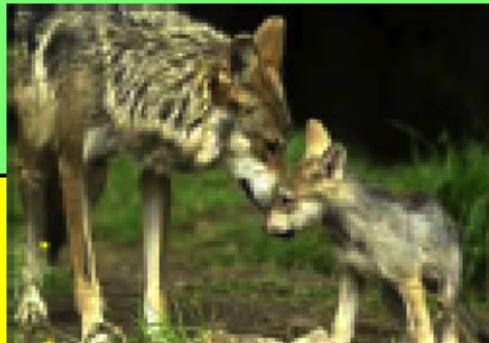
- sperm cells--23 chromosomes
- egg cells (ova)--23 chromosomes

Fertilization is the process of the sperm and egg uniting. The zygote will have a combination of genetic information from the father and mother—a total of 46 chromosomes.

Sexual Reproduction

Advantages

- genetic diversity in species
- ability to adapt to environmental changes



Disadvantages

- requires two parents
- requires time and energy to find a mate and reproduce
- can only produce small populations
- requires travel

